claims 1, 3 and 9 for the pending claims 1, 3 and 9. A marked-up version of the claims with all the changes shown is attached also.

Claims 2, 4, 5, 8, 10, 11 are cancelled.

REMARKS

Claims 1, 3, 6, 7, 9, 12, 13 are in the application; claims 2, 4, 5, 8, 10, 11 have been cancelled.

Reconsideration and withdrawal of the rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Toepker et al. (EP 0752332 A1) in view of Metals Handbook Volume 1 and ASM Handbook Volume 5 is respectfully requested.

Reconsideration and withdrawal of the rejection of claims 9-13 under 35 U.S.C. 103(a) as being unpatentable over Toepker et al. (EP 0752332 A1) in view of ASM Handbook Volumes 4 and 5 is respectfully requested.

Claim 1 has been amended by incorporating therein features

of claims 2, 4, 5, and 8; claim 9 has been amended by incorporating therein the features of claims 10 and 11.

The amended claims 1 and 9 now precisely define that the heat treatment is carried out at the transitional sections between the U-shaped torsionally yielding central longitudinal section and the torsion-proof end sections on a specific tube blank material (claims 1 and 9) and at certain temperatures for a certain duration (claim 1).

The transitional sections (identified in the drawings at "b") are the critical areas of a transverse support of a twist beam rear axle of a passenger car. In this transition area there exists a great strength and stiffness jump from the torsion-proof end sections to the torsionally yielding central longitudinal section.

Despite the great strength and stiffness jump, generally by a factor 17, as a result of the different cross-sections, it is still necessary to prevent any discontinuity in the microstructure of these transitional sections, i.e., a harmonic transition in the form of a special course of the stiffness must

be ensured.

In this context, the different types of stress which overlay one another in the area of the transitional sections, such as torsion, bending, barreling and buckling as a result of the different loads acting on the transverse support during driving conditions must be taken into consideration.

Obtaining the desired harmonic transition in regard to the course of the stiffness cannot be simply derived from the general data and information in regard to annealing, hardening, and tempering etc. as disclosed in the Metals Handbook Volume 1 and/or ASM Handbook Vols. 4 and 5. The cited prior art references due not address any such problems.

An inventive step is required in order to recognize that only with targeted temperature ranges and time values, as specifically claimed in the present application, the special course of stiffness ensuring a harmonic transition can be obtained and, in this way, the damage in the transitional sections which has been observed in connection with prior art transverse supports during operation of the passenger car can be

prevented.

In this context, it is important that by means of the heat treatment of the transitional sections the hardness, the extension, and the microstructure are specially adjusted relative to one another in order to be able to take into account the deformation behavior of the transitional sections of a transverse support during operation of the vehicle.

Such a special microstructure, obtained with the features as claimed in amended claims 1 and 9, cannot be derived from the disclosure of the cited prior art Metals and ASM Handbooks which provide only a general teaching in regard to heat treatments.

The independent claims 1 and 9 are therefore believed to be allowable over the cited prior art.

Therefore, in view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Any additional fees or charges required at this time in

connection with the application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.

Respectfully submitted,

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Dated: May 16, 2002
Encl.: amended claims 1, 3, 9 (clean copy and marked-up version)

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on May 16, 2002.

By: _____
Friedrich Kueffner

Date: May 16, 2002

MARKED-UP VERSION OF AMENDED CLAIMS 1, 3, 9

1. (Amended) A method of manufacturing a bending-resistant, torsionally yielding tubular profiled member as a transverse support of a twist beam rear axle of a passenger car, the method comprising the steps of:

cold-forming a tube blank of tempering steel to a tubular profiled member with a torsionally yielding central longitudinal section of a U-shaped cross-section and with opposed torsion-proof end sections, wherein the tempering steel of the tube blank is of the specification 22MnB5;

annealing ~~at least partial sections~~ transitional sections of the tubular profiled member located between the torsionally yielding central longitudinal section and the opposed torsion-proof end sections at a temperature level between 920° C and 950° C ~~850° C and 960°C~~;

hardening the tubular profiled member in water at a temperature above the AC3 point;

tempering the tubular profiled member at a temperature ~~between 200° C and 550° C~~ of approximately 280° C for a duration of approximately 20 minutes ~~more than five minutes~~;

subjecting the tubular profiled member at least to an

outer surface hardening process; and

subjecting the tubular profiled member to further configuration processing steps for completing a twist beam rear axle.

3. (Amended) The method according to claim 1 ~~2~~, wherein the step of annealing is carried out at a temperature level of approximately 930° C.

9. (Amended) A method of manufacturing a bending-resistant, torsionally yielding tubular profiled member as a transverse support of a twist beam rear axle of a passenger car, the method comprising the steps of:

cold-forming a tube blank of case hardening steel to a tubular profiled member with a torsionally yielding central longitudinal section of a U-shaped cross-section and opposed torsion-proof end sections, wherein the case-hardening steel of the tube blank is of the specification C15;

case-hardening ~~at least partial sections~~ transitional sections of the tubular profiled member located between the torsionally yielding central longitudinal section and the opposed torsion-proof end sections during a heat treatment with

carburization of the surface of the tubular profiled member and subsequent quenching;

subjecting the tubular profiled member at least to an outer surface hardening process; and

subjecting the tubular profiled member to further configuration processing steps for completing a twist beam rear axle.